

SECOND ANNUAL KENTUCKY ENERGY EFFICIENCY CONFERENCE
Friday, November 16, 2007
Capital Plaza Hotel

More than 200 attendees from over 100 organizations participated in the second annual Kentucky Energy Efficiency Conference, held in Frankfort, Kentucky, on Friday, November 16th, 2007. Legislators, utility representatives, state and municipal employees, NGO representatives, community leaders, and other stakeholders met to hear about recent efforts to promote energy efficiency in Kentucky and to discuss creative ideas for meeting challenges.

MEETING SUMMARY

Welcoming Remarks

Talina Mathews, Executive Director of the Governor's Office of Energy Policy, welcomed participants to the meeting and thanked the speakers and sponsors. She drew attention to the recent passage of [Kentucky House Bill 1](#), which was signed by the governor on August 30 and identifies ways in which Kentucky can compete in the world market. The bill, among other provisions, moved the Office of Energy Policy from the Commerce Cabinet to the Governor's Office; created a sales tax credit for energy-efficiency projects; encourages the State Finance and Administrative Cabinet to require LEED or Green Globe certifications and ENERGY STAR products in state procurements; and requires a Kentucky Legislative Research Commission study on energy efficient building and design practices. She recognized Kentucky legislators in attendance, including members of the Special Subcommittee on Energy.

Ms. Mathews noted that given the likelihood of continued energy price increases, Kentucky must pursue a strategy to address both increasing demand and increasing ages of power plants. She encouraged participants to read [Kentucky's Energy Strategy](#) to learn more about Kentucky's initiatives for meeting energy demands and achieving energy independence.

She noted that this conference is an outgrowth of the National Action Plan on Energy Efficiency (NAPEE), a private-public initiative to create a sustainable, aggressive national commitment to energy efficiency through the collaborative efforts of gas and electric utilities, utility regulators, and other partner organizations. NAPEE is facilitated by the U.S. Environmental Protection Agency and U.S. Department of Energy.

Ms. Mathews also recognized the Kentucky Energy Efficiency Working Group. This group is made up of twenty organizations from across the Commonwealth of Kentucky, and its goal is to promote increasing energy efficiency by investigating issues such as building code changes, tax credits, financial incentives, rate design changes that align incentives of all stakeholders, viability of renewable generation options, and energy efficiency education. In addition, members of the Working Group provided funding for and collaborated on the scope and focus of the conference.

Keynote Address: The New Imperative: Partnerships for Change

Diane Munns, Executive Director, Retail Energy Services, Edison Electric Institute, commended participants for their continued efforts. She said that it is critical that Kentucky recognize that even the best plans take time and effort to implement.

Ms. Munns observed that the market for energy and building materials is now a global one, as China and India join the market with resources like coal, copper and steel. She noted a rising demand for energy, much of which can be attributed to increasing numbers of electronics in homes. She informed the group of the increased stress this places on the national grid – it will not be able to meet demand unless it is repaired and expanded. However, the “Not-In-My-Back-Yard” (NIMBY) syndrome continues to grow, increasing the number of hurdles that must be overcome in order to expand generation and transmission infrastructures. She added that looming carbon constraints will also need to be addressed.

Ms. Munns stated that a strategy for meeting energy demand in a carbon-constrained environment will require the use of strategically deployed technology. If Kentucky wishes to capitalize on its supply of coal, it must do so in an environmentally acceptable manner. Carbon sequestration technologies, however, remain years away from commercial availability. She believed that an energy strategy that begins with energy efficiency could buy sufficient time, delaying the need for new generation plants until coal plants can be built to utilize sequestration technology.

Ms. Munns also noted that state involvement is crucial to accelerating and capturing cost effective energy efficiency. She gave examples of necessary actions to achieve greater energy efficiency. Building codes must be addressed on a state and local level. Regulations should be altered to encourage efficient building by the private sector. Resources and reference materials should be provided to customers to encourage, clarify, and simplify the process of improving energy efficiency in homes and buildings. Electric rates must be set to send a message to customers.

NAPEE, a partnership of over 120 organizations, convened in early 2006 to provide policy recommendations for a national strategy to improve energy efficiency. The [NAPEE vision for 2025](#) lays a framework for implementing effective policies to increase energy efficiency. Ms. Munns suggested states may find the vision’s approaches for measuring progress useful as well.

Ms. Munns emphasized that the country is beyond the era of Jimmy Carter’s “put on a sweater” recommendations for energy efficiency, but rather that now is the time to use energy management technology that maximizes system use. She asserted that a revolution in energy efficiency is possible if organizations will commit to advocating policies that support development of such technologies.

Discussion:

- Worries about the ability of customers to accept a price schedule may lack validity (e.g. the cell phone industry utilizes a price schedule)
- There is a need for guidance during the process of “decoupling” utility profits from the volume of electricity sold.
- “Statistical recoupling” may be a solution. This model sets utility revenues assuming an absence of energy efficiency programs. Utilities that have energy efficiency programs will recoup the benefits of lowered demand by saving on the cost of generation.

Panel: Utility Regulation and Opportunities for Energy Efficiency – What State Government Can do to Advance Energy Efficiency in Kentucky

Linda Breathitt, Senior Energy and Regulatory Consultant; Thelen, Reid, Brown, Raysman & Steiner, LLP, applauded regulators for passing HB-1, noting that this is just one example of states and other entities taking the lead where Congress has not. Another state and regional leadership

example is the recent announcement of the Midwest Independent Transmission System Operator (MISO), which has a one-million mile footprint, that it will partner with 100 organizations to prepare a national action plan for stakeholders to modernize the grid. PJM Interconnection has announced similar plans. Ms. Breathitt observed that together, these initiatives incorporate 60-70% of the nation. Activists are demanding that someone take charge, and to date, that change has occurred at the state and regional levels.

According to Ms. Breathitt, the current state of energy costs stems from the first demand-led energy shock. She said that energy efficiency must be part of the answer, along with coal-to-liquids, renewable energy and fuels, nuclear energy, and smart-grid technologies.

Mark David Goss, Chairman, Kentucky Public Service Commission, predicted that energy policy will be dominated by a central truth: limits on CO2 emissions are a virtual certainty. He said living with carbon constraints will require multiple solutions. Within the spectrum of solutions, from efficient light bulbs to carbon sequestration, energy efficiency is the lowest hanging fruit. He noted that if each person in the U.S. replaced one incandescent light bulb with a fluorescent, the energy saved would be equivalent to unplugging the city of Louisville. He emphasized that simple activities can result in incredible savings.

Following their opening remarks, Ms. Breathitt and Chairman Goss addressed questions from the audience. In this discussion, they made the following recommendations:

- The Public Service Commission would find it useful for the Kentucky Energy Efficiency Working Group to learn about and share with the Commission initiatives and practices utilized by other states to manage consumer demand.
- Provisions of authority from the legislature would enable the Commission to compel utilities to set energy efficiency goals. The Commission does not currently have the authority from the legislature to “decouple” utility profits from the amount of electricity sold.
- Requiring, rather than encouraging, the State Finance and Administrative Cabinet to utilize the LEED and Green Globe ratings in state procurements would set a stronger example.
- Older plants in the state require significant retrofitting and maintenance to comply with environmental standards; this adds to consumer costs.
- Low rates pose disincentives to customers in pursuing energy efficiency within homes. Smart meters and fluctuating rates may not encourage consumers to change behaviors in an area where peak rates are low; the savings per changed behavior will not seem significant. However, even saving a penny an hour will result in savings of \$85 over the course of a year. This message must be transmitted clearly to customers and not just embedded in the bill.
- While application of energy efficiency programs may be best implemented at the state level, the U.S. Department of Energy (DOE) and the Federal Energy Regulatory Commission (FERC) can regulate and encourage the modernization of the transmission grid.

Panel: State Energy Efficiency Legislation and Regulation – Leadership that Works

North Carolina State Representative Pryor Gibson discussed recent North Carolina legislation. In attempting to address increasing demand and increasingly strained infrastructure, the legislature turned to investor owned utilities (IOUs) and other stakeholders in the state for suggestions. According to Representative Gibson, the IOUs asserted that it would be impossible to build infrastructure quickly enough to meet demand – energy efficiency must be part of the solution. The legislature then developed a bill which created a state Renewable Energy Portfolio Standard (REPS) and included a requirement that the state procure only LEED certified buildings. He clarified that

this bill included only incentives, not regulations. While the legislation was implemented too recently to comment on major changes, Representative Gibson noted it has appeared useful in facilitating important discussions extending beyond the use of fluorescent light bulbs to peak generation processes and even renewable energies. He said this process has shown the importance of bringing all stakeholders to the table, as well as the necessity of setting obtainable goals.

Kentucky State Senator Katie Stine discussed Kentucky's energy efficiency programs for schools. With a third of the cost of a school or public building going to pay energy bills, and a third of energy costs stemming from lighting alone, Senator Stine identified a tremendous opportunity to save in schools and state-owned public buildings. She said the state should also consider developing an investment portfolio for state employees which invests in green buildings.

Kentucky State Representative Harry Moberly discussed provisions in HB-1 for a 15% tax credit for buildings reducing energy consumption. He believed this will be useful for Kentucky, which relies extensively on coal for energy production, given the likelihood of federally regulated carbon constraints. Representative Moberly emphasized Kentucky should not merely respond to federal regulations by encouraging energy efficiency; it should proactively pursue development of renewable fuels. He said that states are the great laboratories of policy, and Kentucky should not wait for Washington, DC, to determine its policies for addressing this need. Kentucky must invest financially. It is a good business investment, but it requires immediate action.

In the discussion and question and answer session following the panelists' introductory remarks, panelists made the following recommendations:

- Legislature should require LEED or Green Globe certification, not only for buildings bought by the state but also rentals.
- One approach to developing environmental education programs in schools is to allow IOUs to pay for it in exchange for ad time.

Address from the Governor-Elect

Governor-Elect Steve Beshear discussed two priorities for his administration: production of energy and protection of the environment. While some might feel these priorities conflict, Governor-Elect Beshear believes that Kentucky can lead in production and conservation.

National security requires that the U.S. become less dependent on foreign energies. Kentucky has a resource that can assist the nation in doing just that – coal. However, Governor-Elect Beshear noted Kentucky has an obligation to its citizens, as well as future generations of citizens, to provide clean air. With 90% of its energy coming from coal, this means that Kentucky must become a leader in developing technologies to burn Kentucky coal in a cleaner way. He said Kentucky must also diversify, investing in alternative fuels and biomass, but also in renewable energies such as wind and water.

Governor-Elect Beshear affirmed that the first component of meeting energy demands in an environmentally friendly way is energy efficiency. He said incorporating alternative fuel vehicles into the state fleet is one approach, and that the state must also build greener buildings and retrofit the ones it currently occupies. There are many approaches, and the governor-elect expressed a desire to partner together during his administration to work towards creating a more energy-efficient and environmentally-friendly Kentucky. He also noted that the 2010 Alltech equestrian games

might pose an opportunity for Kentucky to showcase its energy efficiency initiatives for an international audience.

In a discussion session with conference participants, Governor-Elect Beshear also made the following suggestions:

- HB-1 should be expanded beyond investor owned utilities to provide municipal utilities with incentives to develop energy efficiency programs.
- The Kentucky Legislature should consider adopting some federal energy incentives – e.g., a \$2,000 tax cut for buildings achieving a 5-star rating.

Luncheon Keynote: Energy Efficiency's Contributions and the Need for Policy Research

Bill Prindle, Deputy Director, American Council for an Energy-Efficient Economy, painted a picture of the current energy efficiency landscape and discussed how Kentucky can utilize energy efficiency in the 21st century. He noted that efficiency is the state's best energy investment, and requires state policy leadership.

Mr. Prindle stated that the new century marks the end of the era of cheap energy. He noted conventional energy is harder to deliver and with coming legislation, one can predict that the environmental cost of fossil fuels will further drive up prices. Energy efficiency and other clean energy technologies have become serious economic contributors. The \$300B invested in energy efficient technologies and services in 2004 support 1.6 million jobs distributed among manufacturing, services, and construction.

Mr. Prindle observed that energy efficiency also delays strains to the grid from increasing demand, providing time for new supply resources to come online. Since 1970, energy efficiency has met 77% of new energy service demands in the U.S, while new energy supplies have contributed only 23% of new energy service demands. ACEEE studies show that most energy service demand growth can be met through efficiency. Mr. Prindle believed that efficiency and renewables together can meet most future demand growth. In discussion following his presentation, he also noted that better demand side intelligence is needed for graduated rate structures to send signals to customers, as most people know only the amount of their bill and not their electricity rate.

Since Congress is struggling to move transformational energy policies, Mr. Prindle noted that state leadership is more important than ever. States now outspend the federal government at a ratio of 3:1. He urged that, by contributing now, Kentucky can define its role in developing the energy "story" of the 21st century – a story that begins with energy efficiency.

Panel: Utility Regulation and Opportunities for Energy Efficiency – What Utilities can do to Advance Energy Efficiency in Kentucky

Tom Fitzgerald, Kentucky Resources Council, encouraged Kentucky to diversify its energy portfolio. He noted that as a state primarily dependent on coal and other fossil fuels for electricity, Kentucky is very vulnerable to significant increases in energy costs in the event that carbon legislation passes. Rather than continue to place itself at risk by investing in even more coal-fired generation plants, he believed Kentucky should first exhaust the benefits it could reap through energy efficiency. Mr. Fitzgerald asserted that energy efficiency, when paired with the use of renewables, could buy time and allow utilities to avoid developing new coal-fired plants until carbon targets and timeframes are adopted. He mentioned that the August 2007 [An Overview of](#)

[Kentucky's Energy Consumption and Energy Efficiency Potential](#), prepared by the Kentucky Pollution Prevention Center and American Council for an Energy-Efficient Economy, reported that improved energy efficiency alone could meet existing and new demand in the state predicted for 2017.

Mr. Fitzgerald added that full-cost accounting practices which incorporate environmental, health and economic costs should be utilized when evaluating potential generation investments. Such planning processes will necessarily incorporate considerations of fuel diversity, congestion, reliability, as well as environmental hazards and benefits, ultimately resulting in better informed decisions.

He noted that structures must be modified to better align utility interests in efficiency with consumer interest. However, “decoupling” does not necessarily result in an investment in efficiency or customer savings. He noted that in looking to replace the current rate-making design, dialogue with other states that have pioneered successful models is critical. Such discussion will allow Kentucky to better identify the design that best promotes utility goals in an environmentally sustainable way while rewarding the customer for energy efficient behaviors.

Mr. Fitzgerald asserted the development of a sustained stream of funding is needed to ensure investment in renewable energy, energy efficiency, and energy conservation. These investments should match investments in coal-related research. Remaining “competitive” while shifting priorities to efficiency in all sectors may prove challenging, but he believed it is critical to Kentucky’s success.

Mike Kurtz, Partner, Boehm, Kurtz and Lowry, spoke about steps the Commission could take to improve energy efficiency in Kentucky. He observed that the lowest hanging fruit is proper rate design. Customers should understand that costs of production vary across seasons and times. Varying rates can send this signal. He also suggested that demand side management programs should allow industrial companies to opt-out if the company can demonstrate that it is pursuing an independent energy efficiency program. Mr. Kurtz then said that the “decoupling” paradigm requires additional analysis, because guaranteeing a level of income for utilities doesn’t necessarily encourage efficiency; a utility might sell excess energy in a higher market.

Mike Core, President and CEO, Big Rivers Electric Corporation, discussed past initiatives such as distribution of compact fluorescent light bulbs, bringing renewable resources online, and education outreach which have met a significant portion of demand. According to Mr. Core, education initiatives have been extremely popular. In a pilot program, Big Rivers hosted 6 classes on energy efficiency topics, awarding \$13,000 in energy efficiency prizes to over 700 people. He reported that attendance exceeded expectations, and virtually all participants indicated an interest in additional similar activities, such as home energy expos and an electronic newsletter. Big Rivers also performs energy audits.

Mr. Core shared that, with consumers making numerous energy efficiency decisions on their own every day, it is critical to educate consumers on best practices and provide them with resources needed to make energy-efficient decisions. He noted that the Kentucky state government can help to achieve this by providing low income assistance for energy efficiency and weatherization programs, distributing public service announcements on energy efficiency, and developing energy efficiency ratings for manufactured homes (which make up one-third of the homes in Kentucky).

Glenn Jennings, Chairman, CEO, and President, Delta Natural Gas Company, commented that 75% of a consumer's bill reflects production costs and 25% represents the cost of delivery. He observed that conservation practices can result in significant savings.

Mr. Jennings stated that natural gas use for electricity in addition to heat has resulted in high demand, and a subsequent price increase for natural gas. The industry cannot encourage conservation because profits are tied to the volume sold. He emphasized that a strategy must be devised allowing natural gas companies to encourage consumers to conserve without punishing shareholders and employees.

In response to comments that decoupling does not necessitate efficiency programs, Mr. Jennings said that decoupling does remove disincentives for efficiency programs. It removes the conflict of interest that providers have in pursuing energy efficiency.

John Wolfram, Director, Customer Service and Marketing, E. ON US examined the forces driving energy efficiency. Demand for energy is increasing and he noted it appears likely that carbon regulations will add to already increasing environmental compliance costs. Given Kentucky's coal-dependence, Mr. Wolfram stressed that assuming future carbon regulations, the state's low-cost advantage is no longer guaranteed. Carbon capture technology remains in the research and development phase, necessitating a more balanced (i.e. energy diverse) approach. According to him, a full portfolio for reducing CO₂ emissions should include about 60% from equal parts energy efficiency, renewable energy, nuclear and advanced coal generation. About 10% should come from electric vehicles. Only 30% should come from carbon capture and storage.

Utilities have an obligation to provide electricity to Kentucky's growing economy. While coal will remain the primary fuel source, achieving compliance with federal legislation will require new technologies, purchase of CO₂ credits, and new and enhanced customer energy efficiency programs.

Mr. Wolfram noted that Kentucky policymakers can develop legislation tools to assist utilities in mitigating upward cost pressures. They can assist in building consensus among stakeholders. Legislators should develop statewide energy policies promoting adequate supply and energy efficient use. Finally, they should encourage policies promoting energy efficiency as an investment for utilities.

Themes and Next Steps From the 2nd Annual Kentucky Energy Efficiency Conference

Throughout the day, speakers and participants touched on a number of themes. Ms. Arnold, facilitator, and conference participants shared the following reflections on key ideas and needs raised during the conference, including the following:

- There is a need for legislative guidance granting latitude to the Public Utilities Commission to incorporate discussion and negotiation into its review of proposals for maximizing energy efficiency, rather than just having to approve or deny a proposal.
- There is a need to develop criteria for use in evaluating utility proposals on energy efficiency.
- Kentuckians would like the legislature to set an energy efficiency goal or standard, as well as a renewable energy goal or standard.
- The legislature should encourage public employee fund investments in energy efficiency.

- Capitol budget funding for future years should be directed towards retrofitting for energy efficiency. It should include energy efficiency requirements for building procurements, leases, and new buildings.
- The State should encourage energy efficiency incentives for small and medium businesses.
- The State should complete/update energy efficiency resource assessments.
- There is a need for stakeholder agreement on a set of fast track programs.
- The State should develop policies and programs to encourage targeted programs.

Ms. Arnold thanked all conference participants and the Kentucky Energy Efficiency Working Group, reminding attendees that the Working Group will continue to meet and welcome new members who are interested in collaborating on taking energy efficiency proposals forward in the Commonwealth.